

Appl. No. 09/719,709
Amdt. Dated January 8, 2004
Reply to Office action of October 8, 2003
Attorney Docket No. P09410-US1
EUS/J/P/04-3005

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of transmitting and receiving an image ~~between a transmitter and a receiver~~, comprising,
- when transmitting the image: the steps of:
- performing a forward transformation on the image to be transmitted;
 - defining the required regions of interest in the image;
 - creating a mask describing transform coefficients for reconstructing each region of interest;
 - utilizing the mask to classify the transform coefficients into segments;
 - coding each segment independently;
 - concatenating the bit stream of each segment together with necessary stream and header information; and
 - sending the concatenated bit stream to the receiver; and
- when receiving the image:
- receiving the concatenated bit stream and decoding the header information;
 - locating and decoding the segment information associated with the regions of interest in the concatenated bit stream;
 - creating a mask describing which coefficients are needed for reconstructing the segments of each region of interest;
 - decoding the needed segment data from the concatenated bit stream; and
 - reconstructing the needed segments for displaying the reconstructed segments.
- ~~—dividing the image into at least two image regions;~~
- ~~—coding the image regions into a coded symbol stream, said coding utilising a symbolic representation and having predetermined accuracy levels in said image regions;~~
- ~~—compressing the coded symbol stream into a compressed bit stream;~~

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~~generating a definition of an outer boundary line of at least one of the image regions;~~

~~transmitting said definition to the receiver;~~

~~transmitting the compressed bit stream to the receiver; and~~

~~decoding in the receiver with the aid of said definition~~

2. (Currently Amended) The method of claim 1, wherein [[two]] prior to transmitting the image, different image regions are coded to have ~~said~~ predetermined accuracy levels independent ~~independently~~ of each other.

3. (Canceled)

4. (Currently Amended) The method of claim 1, ~~2, or 3~~, wherein when receiving the image, only predetermined parts of the ~~compressed~~ bit stream are decoded.

5. (Currently Amended) The method of claim 1 ~~any of the claims 1, 2, or 3~~, further comprising generating a topology description, prior to transmitting the image, defining the topological relationship between objects and shapes in the image.

6. (Currently Amended) The method of claim 1 ~~any of the claims 1, 2, or 3~~, further comprising generating a shape description, prior to transmitting the image, ~~defining the appearance of~~ for determining the closed boundary line of an object in the image.

7. (Currently Amended) The method of claim 1 ~~any of the claims 1, 2, or 3~~, further comprising generating a segment description prior to transmitting the image, ~~defining which~~ determining the transform coefficients that belong to a respective segment.

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8. (Currently Amended) The method of claim 7, further comprising generating a subset description, prior to transmitting the image, defining which determining the transform coefficients that belong to an independently decodable part of a segment.

9. (Currently Amended) The method of claim 8, further comprising generating a pointer, prior to transmitting the image, for defining a position in the bit stream of a descriptor associated with an object in the image, for the respective one of the above mentioned descriptions.

10. (Currently Amended) An arrangement for transmitting an image, comprising:

- a transmitter and a receiver, wherein the transmitter comprises:

means for performing a forward transformation on the image to be transmitted;

means for defining the required regions of interest in the image;

means for creating a mask describing transform coefficients for reconstructing each region of interest;

classification means for utilizing the mask to classify the transform coefficients into segments;

a coding device for coding each segment independently and to provide the number of bits for each segment;

concatenating means for concatenating the bit stream of each segment together with necessary stream and header information; and

means for sending the concatenated bit stream to the receiver; and wherein the receiver comprises:

receiver means for receiving the concatenated bit stream and decoding the header information;

means for locating and decoding the segment information associated with the regions of interest in the bit stream;

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means for creating a mask describing which coefficients are needed for reconstructing the segments of each region of interest;

a decoder for decoding the needed segment data from the bit stream; and
reconstructing the needed segments for displaying the reconstructed segments.

~~- means for dividing the image into at least two image regions;~~

~~- a coding device for coding the image regions into a coded symbol stream, said coding device utilizing a symbolic representation and having predetermined accuracy levels in said regions;~~

~~- a compressing device for compressing the coded symbol stream into a compressed bit stream; and~~

~~- means in the transmitter for transmitting said compressed bit stream to the receiver;~~

~~- means for generating a definition of an outer boundary line of at least one of the image regions;~~

~~- means in the transmitter for transmitting said definition to the receiver; and~~

~~- a decoder in the receiver for decoding of the compressed bit stream with the aid of said definition.~~

11. (Currently Amended) The arrangement of claim 10, wherein the coding device is arranged to encode [[two]] different image regions to have [[the]] predetermined accuracy levels independent of each other.

12. (Canceled)

13. (Currently Amended) The arrangement of claim 10, [[11, or 12,]] wherein the decoder is arranged to decode only predetermined parts of the compressed bit stream.

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14. (Currently Amended) The arrangement of claim 10 [[, 11, or 12]] wherein the transmitter has means for generating a topology description, defining the topological relationship between objects and shapes in the image.

15. (Currently Amended) The arrangement of claim 10 [[, 11, or 12]] wherein the transmitter has means for generating a shape description, defining the appearance of the closed boundary line of an object in the image.

16. (Currently Amended) The arrangement of claim 10, [[11, or 12,]] wherein the transmitter has means for generating a segment description, defining determining which transform coefficients [[that]] belong to a respective segment.

17. (Currently Amended) The arrangement of claim 16, wherein the transmitter has means for generating a subset description, defining determining which transform coefficients [[that]] belong to an independently decodable part of a segment.

18. (Currently Amended) The arrangement of claim 17, wherein the transmitter has means for generating a pointer, defining that identifies a position in the bit stream for the respective one of the above mentioned descriptions.
